

Prüfbericht-Nr.:	CN25NU06 001	Auftrags-Nr.:	168549449	Seite 1 von 52
Test report no.:		Order no.:		Page 1 of 52
Kunden-Referenz-Nr.:	N/A	Auftragsdatum:	2025-04-15	
Client reference no.:		Order date:		
Auftraggeber: Client:	Lumi United Technology Co., Ltd. Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China			
Prüfgegenstand: Test item:	Smart Lock U400			
Bezeichnung / Typ-Nr.:	DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D			
Identification / Type no.:				
Auftrags-Inhalt: Order content:	Test report only			
Prüfgrundlage: Test specification:	IEC 62368-1: 2018 AS/NZS 62368.1:2022			
Wareneingangsdatum: Date of sample receipt:	2025-04-15			
Prüfmuster-Nr.:	A003967556-001 to 002			
Test sample no.:				
Prüfzeitraum: Testing period:	2025-04-28 to 2025-06-23			
Ort der Prüfung: Place of testing:	See page 5			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by: Henry Guan		genehmigt von: authorized by: Sunny Wang		
Datum: Date: 2025-08-13		Ausstellungsdatum: Issue date: 2025-08-13		
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / Other: The complete report contains below parts: (1) Main report 52 pages including this cover page, (2) Attachment 1: National Differences (7 pages) (3) Attachment 2: Photo documentation (11 pages).				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: P(pass) = entspricht o.g. Prüfgrundlage(n) * Legend: P(pass) = passed a.m. test specification(s)	F(fail) = entspricht nicht o.g. Prüfgrundlage(n) F(fail) = failed a.m. test specification(s)	N/A = nicht anwendbar N/A = not applicable	N/T = nicht getestet N/T = not tested	
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				



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Test report no.:

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Anmerkungen
Remarks

1	<p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</p> <p>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p>
2	<p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature</p> <p><i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature</i></p>
3	<p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben.</p> <p>Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i></p> <p><i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>
4	<p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p>

TEST REPORT IEC 62368-1	
Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	CN25NU06 001
Date of issue	See cover page
Total number of pages	See cover page
Name of Testing Laboratory preparing the Report : TÜV Rheinland (Shenzhen) Co., Ltd.	
Applicant's name	See cover page
Address	See cover page
Test specification:	
Standard	See cover page
Test procedure	See cover page
Non-standard test method	N/A
TRF template used	IECEE OD-2020-F1:2020, Ed.1.4
Test Report Form No.	IEC62368_1E
Test Report Form(s) Originator	UL(US)
Master TRF	Dated 2022-04-14
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General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test item description.....	Smart Lock U400
Trade Mark(s)	
Manufacturer.....	Same as applicant
Model/Type reference	DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D
Ratings	Rechargeable Battery: 7.3V, 4880mAh, 35.63Wh Type-C Power Supply: 5Vdc

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s): See cover page

<input type="checkbox"/> CB Testing Laboratory:	
Testing location/ address	
Tested by (name, function, signature)	
Approved by (name, function, signature) .. :	
<hr/>	
<input type="checkbox"/> Testing procedure: CTF Stage 1:	
Testing location/ address	
Tested by (name, function, signature)	
Approved by (name, function, signature) .. :	
<hr/>	
<input type="checkbox"/> Testing procedure: CTF Stage 2:	
Testing location/ address	
Tested by (name, function, signature)	
Witnessed by (name, function, signature). :	
Approved by (name, function, signature) .. :	
<hr/>	
<input type="checkbox"/> Testing procedure: CTF Stage 3:	
<input type="checkbox"/> Testing procedure: CTF Stage 4:	
Testing location/ address	
Tested by (name, function, signature)	
Witnessed by (name, function, signature). :	
Approved by (name, function, signature) .. :	
Supervised by (name, function, signature) :	

List of Attachments (including a total number of pages in each attachment):

See cover page

Summary of testing:**Tests performed (name of test and test clause):**

All applicable tests as described in Test Case and Measurement Sections were performed.

- Load conditions used during testing see appended table B.2.5 for details.

Following tests performed during evaluation

5.2	Classification and limits of electrical energy sources
5.4.1.4, 9.3, B.1.5, B.2.6	Maximum operating temperatures for materials, components and systems
6.2.2	Electrical power sources (PS) measurements for classification
Annex B.2.5	Input tests
Annex B.3, B.4	Abnormal operating and fault condition tests
Annex F.3.9	Durability, legibility and permanence of markings
Annex M	Battery test
Annex T.4	Steady force test
Annex T.6	Impact tests
Annex T.8	Stress relief test

Remark: the test model is DL-D06D.

Testing location:

TÜV Rheinland (Shenzhen) Co., Ltd.

1-5F, Block 5, No. 1100, Huanli Road, Yungu Community, Xinhua Street Guangming District Shenzhen China

Summary of compliance with National Differences (List of countries addressed):

AU, NZ

Explanation of used codes: AU=Australia, NZ>New Zealand

See attachment 1 of the test report for national differences.

The product fulfils the requirements of AS/NZS 62368.1:2022

Statement concerning the uncertainty of the measurement systems used for the tests

See page 2

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Remark: Above label is representative.

Possible test case verdicts:

- test case does not apply to the test object ...: N/A
- test object does meet the requirement: P (Pass)
- test object does not meet the requirement ...: F (Fail)

Testing:

Date of receipt of test item: See cover page

Date (s) of performance of tests.....: See cover page

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a comma / point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC60068-2-29:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:

Yes

Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies): Lumi United Technology Co., Ltd, Dongguan Third Branch
4th Floor, Building 3, Guanruiyun Valley, No. 136 Gangjian Road, Changping Town, Dongguan City, Guangdong Province

General product information and other remarks:

1. The product covered by this report is a smart lock, which is used for information technology equipment.
2. It is supplied via type-C cable or by certified external rechargeable Li-Polymer battery and the battery evaluated according to IEC 62133-2:2017+AMD1:2021. (See append table 4.1.2 for details)

Model differences:

Smart Lock U400	Version 1	Version 2	Version 3	Version 4	Version 5	Version 6		
Model	DL-D06E	DL-D16E	DL-D06D	DL-D16D	DL-D17D	DL-D15D		
Color	Black	Silver	Black	Silver	Shadow Black	Satin Nickel		
External Panel								
Shape	Curved		Flat		Flat			
Main Body Material	Aluminium		Aluminium		Zinc			
Gliding Plate Material	Aluminium		Zinc		Zinc			
Keypad Material	PC + PET		PMMA		PMMA			
Internal Panel								
Main Body Material	Plastic							
Knob	Aluminium		Aluminium		Zinc			

OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES1: DC input	Ordinary	N/A	N/A	N/A
ES1: All internal circuits				
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS2: <100 Watt circuit (All Internal circuit)	Enclosure/All combustible materials	Equipment safeguard (no ignition)	See 6.4.5	N/A
PS3: >100 Watt circuit (cell output)	Enclosure/All combustible materials	Equipment safeguard (no ignition)	See 6.4.6	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
Battery	Ordinary	N/A	N/A	See annex M
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1: Edges and corners	Ordinary	N/A	N/A	N/A
MS1: Mass of the unit	Ordinary	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
TS1: External surface	Ordinary	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1: LED for indicating	Ordinary	N/A	N/A	N/A
Supplementary Information:				
“B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard				

ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

All internal circuits were considered as ES1 and PS3.

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Clause	Requirement + Test	Result - Remark	Verdict
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4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies	(See appended table 4.1.2)	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.3	Equipment design and construction	Evaluation of construction and limitations which provide protection in regard to risk of ignition, mechanical-caused injury and thermal burn.	P
4.1.4	Specified ambient temperature for outdoor use (°C):	Not intend for outdoor use	N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)		N/A
4.1.15	Markings and instructions	(See Annex F)	P
4.4.3	Safeguard robustness	See below	P
4.4.3.1	General		P
4.4.3.2	Steady force tests	(See Annex T.4)	P
4.4.3.3	Drop tests		N/A
4.4.3.4	Impact tests	(See Annex T.6)	P
4.4.3.5	Internal accessible safeguard tests		N/A
4.4.3.6	Glass impact tests		N/A
4.4.3.7	Glass fixation tests		N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	See Annex T.8	P
4.4.3.9	Air comprising a safeguard		N/A
4.4.3.10	Accessibility, glass, safeguard effectiveness	After tests of 4.4.4.2, 4.4.4.3 and 4.4.4.8, no safeguard damaged.	P
4.4.4	Displacement of a safeguard by an insulating liquid		N/A
4.4.5	Safety interlocks	No such device	N/A
4.5	Explosion		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.5.1	General		P
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P
	No harm by explosion during single fault conditions	(See Clause B.4)	P
4.6	Fixing of conductors		N/A
	Fix conductors not to defeat a safeguard	Class III equipment, no such conductors would defeat a safeguard	N/A
	Compliance is checked by test.....:		N/A
4.7	Equipment for direct insertion into mains socket-outlets		N/A
4.7.2	Mains plug part complies with relevant standard ...:		N/A
4.7.3	Torque (Nm).....:		N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General	No coin/button cell batteries used.	N/A
4.8.2	Instructional safeguard.....:		N/A
4.8.3	Battery compartment door/cover construction		N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	Likelihood of fire or shock due to entry of conductive object		P
4.10	Component requirements		N/A
4.10.1	Disconnect Device		N/A
4.10.2	Switches and relays		N/A

5	ELECTRICALLY-CAUSED INJURY		P
5.2	Classification and limits of electrical energy sources		P
5.2.2	ES1, ES2 and ES3 limits	(See appended table 5.2)	P
5.2.2.2	Steady-state voltage and current limits	(See appended table 5.2)	P
5.2.2.3	Capacitance limits	No such capacitance	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.4	Single pulse limits..... :	No such single pulses generated in the EUT or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses..... :	No such repetitive pulses within the EUT	N/A
5.2.2.6	Ringing signals	No such ringing signals within the EUT	N/A
5.2.2.7	Audio signals		N/A
5.3	Protection against electrical energy sources		N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	Only ES1 exist in the equipment	N/A
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits		N/A
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements		N/A
	Test with test probe from Annex V		—
5.3.2.2 a)	Air gap – electric strength test potential (V)..... :		N/A
5.3.2.2 b)	Air gap – distance (mm) :		N/A
5.3.2.3	Compliance		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	No insulation as a safeguard.	N/A
5.4.1.3	Material is non-hygroscopic		N/A
5.4.1.4	Maximum operating temperature for insulating materials..... :		P
5.4.1.5	Pollution degrees		N/A
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling test		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage		N/A
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.2	Vicat test.....:		N/A
5.4.1.10.3	Ball pressure test.....:		N/A
5.4.2	Clearances		N/A
5.4.2.1	General requirements		N/A
	Clearances in circuits connected to AC Mains, Alternative method		N/A
5.4.2.2	Procedure 1 for determining clearance		N/A
	Temporary overvoltage		—
5.4.2.3	Procedure 2 for determining clearance		N/A
5.4.2.3.2.2	a.c. mains transient voltage		—
5.4.2.3.2.3	d.c. mains transient voltage		—
5.4.2.3.2.4	External circuit transient voltage.....:		—
5.4.2.3.2.5	Transient voltage determined by measurement		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages:		N/A
5.4.2.6	Clearance measurement		N/A
5.4.3	Creepage distances		N/A
5.4.3.1	General		N/A
5.4.3.3	Material group	IIIa&IIIb	—
5.4.3.4	Creepage distances measurement.....:		N/A
5.4.4	Solid insulation		N/A
5.4.4.1	General requirements		N/A
5.4.4.2	Minimum distance through insulation		N/A
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Insulating compound forming cemented joints	No such construction within the EUT	N/A
5.4.4.6	Thin sheet material	No such material	N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs)		N/A
5.4.4.6.3	Non-separable thin sheet material	No such thin sheet material within the EUT	N/A
	Number of layers (pcs)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....:		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz, E_P , K_R , d , V_{PW} (V)		N/A
	Alternative by electric strength test, tested voltage (V), K_R		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance ($M\Omega$)		N/A
	Electric strength test		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire as part of supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No such components	N/A
5.4.8	Humidity conditioning	No test required.	N/A
	Relative humidity (%), temperature (°C), duration (h)		—
5.4.9	Electric strength test		N/A
5.4.9.1	Test procedure for type test of solid insulation.....:	No such solid insulation	N/A
5.4.9.2	Test procedure for routine test	No routine tests considered.	N/A
5.4.10	Safeguards against transient voltages from external circuits	No such external circuits	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test.....:		N/A
5.4.10.3	Verification for insulation breakdown for impulse test		N/A
5.4.11	Separation between external circuits and earth	No such external circuits	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U_{op} (V)		—
	Nominal voltage U_{peak} (V)		—
	Max increase due to variation ΔU_{sp}		—
	Max increase due to ageing ΔU_{sa}		—
5.4.11.3	Test method and compliance		N/A
5.4.12	Insulating liquid	No such insulating liquid used	N/A
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid		N/A
5.4.12.3	Compatibility of an insulating liquid		N/A
5.4.12.4	Container for insulating liquid		N/A
5.5	Components as safeguards		N/A
5.5.1	General	See below	N/A
5.5.2	Capacitors and RC units	No such capacitors or RC units	N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....		N/A
5.5.3	Transformers	No such transformers	N/A
5.5.4	Optocouplers	No such optocouplers	N/A
5.5.5	Relays		N/A
5.5.6	Resistors	No such resistors	N/A
5.5.7	SPDs		N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable	The equipment is not directly connected to the mains	N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment		N/A
	RCD rated residual operating current (mA)		—
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		—
	Protective earthing conductor size (mm^2)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		—
	Protective bonding conductor size (mm ²).....:		N/A
5.6.4.2	Protective current rating (A)		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm).....:		N/A
	Terminal size for connecting protective bonding conductors (mm)		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method		N/A
5.6.6.3	Resistance (Ω) or voltage drop		N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm ²).....:		N/A
	Class II with functional earthing marking		N/A
	Appliance inlet cl & cr (mm)		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks		N/A
5.7.2.1	Measurement of touch current		N/A
5.7.2.2	Measurement of voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
5.7.4	Unearthed accessible parts.....:		N/A
5.7.5	Earthed accessible conductive parts		N/A
5.7.6	Requirements when touch current exceeds ES2 limits		N/A
	Protective conductor current (mA).....:		N/A
	Instructional Safeguard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA).....:		N/A
	b) Equipment connected to unearthing external circuits, current (mA).....:		N/A
5.8	Backfeed safeguard in battery backed up supplies		N/A
	Mains terminal ES		N/A
	Air gap (mm)		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of PS and PIS		P
6.2.2	Power source circuit classifications	See table 6.2.2	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	No Arcing PIS	N/A
6.2.3.2	Resistive PIS	See appended table 6.2.3.2	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....:	See appended tables 5.4.1.4, 9.3, B.1.5, B.2.6 and B.3, B.4 for details	P
	Combustible materials outside fire enclosure.....:	No such materials	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard method	Method by control of fire spread applied	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	Supplementary safeguards		P
6.4.3.2	Single Fault Conditions.....:	(See appended table B.4)	P
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.5.2	Supplementary safeguards	See below	P
6.4.6	Control of fire spread in PS3 circuits	<p>Compliance detailed as follows:</p> <ul style="list-style-type: none"> – <u>Printed board</u>: rated min. V-1 – <u>Battery pack</u>: complying with IEC/EN 62133-2 – <u>All other components</u>: at least V-2 except for parts mounted on min. V-1 material or small parts of combustible material (with mass less than 4g). – The internal wires were complied to UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21 – V-0 plastic enclosure and metal enclosure used. 	P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		N/A
6.4.8.2	Fire enclosure and fire barrier material properties	V-0 plastic enclosure and metal enclosure used.	P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	Fire enclosure used.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below	P
6.4.8.3.1	Fire enclosure and fire barrier openings	No opening on the fire enclosure	P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties	No openings	N/A
	Openings dimensions (mm)	:	N/A
6.4.8.3.4	Bottom openings and properties	No openings	N/A
	Openings dimensions (mm)	:	N/A
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard..... :		N/A
6.4.8.3.5	Side openings and properties	No openings	N/A
	Openings dimensions (mm)	:	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c).....:		N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating.....:	V-0 plastic enclosure and metal enclosure used.	P
6.4.9	Flammability of insulating liquid.....:		N/A
6.5	Internal and external wiring		P
6.5.1	General requirements	The external and internal wires are complied with UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21;	P
6.5.2	Requirements for interconnection to building wiring	No such wirings	N/A
6.5.3	Internal wiring size (mm ²) for socket-outlets	No such socket-outlets	N/A
6.6	Safeguards against fire due to the connection to additional equipment		N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES	P
7.2	Reduction of exposure to hazardous substances	N/A
7.3	Ozone exposure	N/A
7.4	Use of personal safeguards or personal protective equipment (PPE)	N/A
	Personal safeguards and instructions.....:	—
7.5	Use of instructional safeguards and instructions	N/A
	Instructional safeguard (ISO 7010).....:	—
7.6	Batteries and their protection circuits	P

8	MECHANICALLY-CAUSED INJURY	P
8.2	Mechanical energy source classifications	P
8.3	Safeguards against mechanical energy sources	N/A
8.4	Safeguards against parts with sharp edges and corners	P
8.4.1	Safeguards	N/A
	Instructional Safeguard.....:	N/A
8.4.2	Sharp edges or corners	Edges and corners of the enclosure are rounded
8.5	Safeguards against moving parts	N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving part
	MS2 or MS3 part required to be accessible for the function of the equipment	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard:		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m)		N/A
	Space between end point and nearest fixed mechanical part (mm).....:		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts		N/A
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N).....:		N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps		N/A
	Explosion test.....:		N/A
8.5.5.3	Glass particles dimensions (mm)		N/A
8.6	Stability of equipment		N/A
8.6.1	General	MS1 only	N/A
	Instructional safeguard		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test.....:		N/A
8.6.2.3	Downward force test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.6.3	Relocation stability		N/A
	Wheels diameter (mm) :		—
	Tilt test		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test..... :		N/A
8.7	Equipment mounted to wall, ceiling or other structure		N/A
8.7.1	Mount means type..... :		N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N)..... :		N/A
	Test 2, number of attachment points and test force (N)..... :		N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm) :		N/A
8.8	Handles strength		N/A
8.8.1	General		N/A
8.8.2	Handle strength test		N/A
	Number of handles..... :		—
	Force applied (N) :		—
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test		N/A
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions..... :		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N)..... :		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N) :		—
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for slide-rail mounted equipment (SRME)		N/A
8.11.1	General		N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard..... :		N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	Telescoping or rod antennas		N/A
	Button/ball diameter (mm).....:		—

9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications		P
9.3	Touch temperature limits		
9.3.1	Touch temperatures of accessible parts	TS1: external enclosure (See appended table 5.4.1.4 for details)	P
9.3.2	Test method and compliance	(See appended table 5.4.1.4 for details)	P
9.4	Safeguards against thermal energy sources		P
9.5	Requirements for safeguards		N/A
9.5.1	Equipment safeguard	Only class 1 thermal source exist in the equipment	N/A
9.5.2	Instructional safeguard		N/A
9.6	Requirements for wireless power transmitters		N/A
9.6.1	General		N/A
9.6.2	Specification of the foreign objects		N/A
9.6.3	Test method and compliance		N/A

10	RADIATION		P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1: LED only for indicating use which is considered as low power application	P
	Lasers		—
	Lamps and lamp systems		—
	Image projectors		—
	X-Ray		—
	Personal music player.....		—
10.3	Safeguards against laser radiation		N/A
	The standard(s) equipment containing laser(s) comply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		P
10.4.1	General requirements	LEDs complies with Exempt Group or Risk Group 1 of IEC/EN 62471.	P
	Instructional safeguard provided for accessible radiation level needs to exceed		N/A
	Risk group marking and location	Such marking is not required	N/A
	Information for safe operation and installation		N/A
10.4.2	Requirements for enclosures	No such enclosure used	N/A
	UV radiation exposure		N/A
10.4.3	Instructional safeguard.....:		N/A
10.5	Safeguards against X-radiation		N/A
10.5.1	Requirements	No X-radiation exists the equipment	N/A
	Instructional safeguard for skilled persons.....:		—
10.5.3	Maximum radiation (pA/kg)		—
10.6	Safeguards against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output $L_{Aeq,T}$, dB(A)		N/A
	Unweighted RMS output voltage (mV).....:		N/A
	Digital output signal (dBFS)		N/A
10.6.3	Requirements for dose-based systems		N/A
10.6.3.1	General requirements		N/A
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)		N/A
	Warning for MEL ≥ 100 dB(A)		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards.....:		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV).....:		N/A
10.6.6.2	Corded listening devices with digital input		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. acoustic output $L_{Aeq,T}$, dB(A)		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output $L_{Aeq,T}$, dB(A)		N/A

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.1	General		P
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	P
B.2	Normal operating conditions		P
B.2.1	General requirements	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers	See annex E for details.	P
B.2.3	Supply voltage and tolerances	Rated voltage considered	P
B.2.5	Input test.....	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General		P
B.3.2	Covering of ventilation openings	No openings	N/A
	Instructional safeguard.....		N/A
B.3.3	DC mains polarity test	The EUT is not connected to a D.C. mains	N/A
B.3.4	Setting of voltage selector	No setting of voltage selector within the EUT	N/A
B.3.5	Maximum load at output terminals	No output terminals	N/A
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions	The maximum attainable output power considered as normal operating condition	P
B.3.8	Safeguards functional during and after abnormal operating conditions	(See appended table B.3, B.4)	P
B.4	Simulated single fault conditions		P
B.4.1	General		P
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test	No motor	N/A
B.4.4	Functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.3, B.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.4.3	Short circuit of functional insulation on coated printed boards	(See appended table B.3, B.4)	P
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnection of passive components		N/A
B.4.7	Continuous operation of components	No such components	N/A
B.4.8	Compliance during and after single fault conditions	(See appended table B.3, B.4)	P
B.4.9	Battery charging and discharging under single fault conditions	Battery complied with Annex M	P
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus.....:		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		P
E.1	Electrical energy source classification for audio signals		P
	Maximum non-clipped output power (W)	See appended table B.2.5	—
	Rated load impedance (Ω)	(See appended table 4.1.2)	—
	Open-circuit output voltage (V).....:	ES1	—
	Instructional safeguard.....:	No safeguard necessary	—
E.2	Audio amplifier normal operating conditions		P
	Audio signal source type	A sine wave of 1 kHz	—
	Audio output power (W)	The maximum attainable output power condition considered as normal operation condition, short circuit considered as abnormal operating condition.	—
	Audio output voltage (V).....:	ES1	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated load impedance (Ω)	(See appended table 4.1.2)	—
	Requirements for temperature measurement		P
E.3	Audio amplifier abnormal operating conditions	The maximum attainable output power condition considered as normal operation condition, short circuit considered as abnormal operating condition.	N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language: English		—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units comply with IEC 60027-1.	P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific	Graphical symbols comply with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification: See copy of marking plate		P
F.3.2.2	Model identification: See copy of marking plate		P
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains	The equipment is not directly connected to the mains supply.	N/A
F.3.3.2	Equipment without direct connection to mains	See copy of marking plate.	P
F.3.3.3	Nature of the supply voltage.....: DC		P
F.3.3.4	Rated voltage: See copy of marking plate		P
F.3.3.5	Rated frequency:		N/A
F.3.3.6	Rated current or rated power: See copy of marking plate		P
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings:		N/A
F.3.5.2	Switch position identification marking		N/A
F.3.5.3	Replacement fuse identification and rating markings.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional safeguards for neutral fuse.....:		N/A
F.3.5.4	Replacement battery identification marking	Replacement battery, but it cannot be replaced by incorrect type because of the Poka-Yoke design.	N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location		N/A
F.3.6	Equipment markings related to equipment classification		N/A
F.3.6.1	Class I equipment	Class III equipment	N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Protective bonding conductor terminals		N/A
F.3.6.2	Equipment class marking		N/A
F.3.6.3	Functional earthing terminal marking.....:		N/A
F.3.7	Equipment IP rating marking	IPX0	N/A
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	P
F.3.10	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. With the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	P
F.4	Instructions		P
	a) Information prior to installation and initial use		P
	b) Equipment for use in locations where children not likely to be present	Not such equipment	N/A
	c) Instructions for installation and interconnection		P
	d) Equipment intended for use only in restricted access area	Not such equipment	N/A
	e) Equipment intended to be fastened in place	Not such equipment	N/A
	f) Instructions for audio equipment terminals	No such terminals.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	g) Protective earthing used as a safeguard	Not such equipment	N/A
	h) Protective conductor current exceeding ES2 limits	ES1 only	N/A
	i) Graphic symbols used on equipment		N/A
	j) Permanently connected equipment not provided with all-pole mains switch		N/A
	k) Replaceable components or modules providing safeguard function		N/A
	l) Equipment containing insulating liquid		N/A
	m) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		P
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General	No switch used	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.1.3	Test method and compliance		N/A
G.2	Relays		N/A
G.2.1	Requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		N/A
G.3.1	Thermal cut-offs		N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links		N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors		N/A
G.3.4	Overcurrent protection devices		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4		P
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions	No failure occurred for NTC in three M.4 test.	P
G.4	Connectors		N/A
G.4.1	Spacings	No such connector with insulated surfaces accessible within the EUT	N/A
G.4.2	Mains connector configuration.....		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	Wound components		N/A
G.5.1	Wire insulation in wound components		N/A
G.5.1.2	Protection against mechanical stress		N/A
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle)	—	—
	Test temperature (°C)	—	—
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers		N/A
G.5.3.1	Compliance method		N/A
	Position.....		N/A
	Method of protection		N/A
G.5.3.2	Insulation		N/A
	Protection from displacement of windings.....	—	—
G.5.3.3	Transformer overload tests		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding temperatures		N/A
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter.....	—	—
G.5.3.4.2	Transformers with basic insulation only		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.4.3	Transformers with double insulation or reinforced insulation		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
G.5.4.6.3	Alternative method		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage		—
G.6	Wire Insulation		N/A
G.6.1	General		N/A
G.6.2	Enamelled winding wire insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements		N/A
	Type		—
G.7.2	Cross sectional area (mm ² or AWG).....		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).....:		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, D (mm).....:		—
	Radius of curvature after test (mm)		—
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements		N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	Integrated circuit (IC) current limiters		N/A
G.9.1	Requirements	No IC current limiter provided within the equipment.	N/A
	IC limiter output current (max. 5A).....:		—
	Manufacturers' defined drift		—
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	Resistors		N/A
G.10.1	General		N/A
G.10.2	Conditioning		N/A
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.11	Capacitors and RC units		N/A
G.11.1	General requirements		N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage $V_{ini,a}$		—
	Routine test voltage, $V_{ini, b}$		—
G.13	Printed boards		P
G.13.1	General requirements	Approved PCB used, see appended table 4.1.2 for detail	P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements		N/A
G.15	Pressurized liquid filled components		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A
G.15.3	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test.....:		—
	Mains voltage that impulses to be superimposed on		—
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test		—
G.16.3	Capacitor discharge test		N/A
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz)		—
H.3.1.2	Voltage (V)		—
H.3.1.3	Cadence; time (s) and voltage (V)		—
H.3.1.4	Single fault current (mA):		—
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V).....:		N/A
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N/A
J.1	General		N/A
	Winding wire insulation		—
	Solid round winding wire, diameter (mm).....:		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm ²)		N/A
J.2/J.3	Tests and Manufacturing		—
K	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard.....:		N/A
K.2	Components of safety interlock safeguard mechanism		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
K.5.1	Under single fault condition		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm)		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm)		N/A
	Electric strength test before and after the test of K.7.2.....		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		N/A
L.1	General requirements		N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single-phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
	Instructional safeguard.....		N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Batteries and their cells comply with relevant IEC standards.....	The battery complies with IEC 62133. The whole product applied the requirements of this Annex. (See appended table 4.1.2)	P

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Clause	Requirement + Test	Result - Remark	Verdict
M.3	Protection circuits for batteries provided within the equipment		P
M.3.1	Requirements	Safeguards considered during charging and discharging cycles as determined for expected and foreseeable use according to the user instructions.	P
M.3.2	Test method	(See appended table Annex M)	P
	Overcharging of a rechargeable battery	By inspection of the data for battery and tests of B.4. See appended table B.4.	P
	Excessive discharging	By inspection and tests as for charging above. See appended table B.4.	P
	Unintentional charging of a non-rechargeable battery	Rechargeable battery used	N/A
	Reverse charging of a rechargeable battery	Built-in battery used, reverse charging is prevented	N/A
M.3.3	Compliance	No chemical leaked, no explosion occurred, no flame or expulsion of parts observed after tests. The battery temperature and battery charge/discharge current didn't exceed the specifications from manufacturer during the tests.	P
M.4	Additional safeguards for equipment containing a portable secondary lithium battery		P
M.4.1	General	The equipment with a rechargeable battery pack (contains two cells).	P
M.4.2	Charging safeguards	See below	P
M.4.2.1	Requirements	(See appended table M)	P
M.4.2.2	Compliance.....:	(See appended table M)	P
M.4.3	Fire enclosure.....:	Fire enclosure used	P
M.4.4	Drop test of equipment containing a secondary lithium battery	Verified by tests and measurements in M.4.4.3 and M.4.4.5.	P
M.4.4.2	Preparation and procedure for the drop test		P
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%)::		P
M.4.4.4	Check of the charge/discharge function		P
M.4.4.5	Charge / discharge cycle test		P

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.4.6	Compliance		P
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		P
M.6.1	External and internal faults	The cell comply with IEC 62133 which considered the forced internal short circuit test. No such explosion or fire likely to result from short circuits.	P
M.6.2	Compliance		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration	Not lead acid or NiCd battery.	N/A
	Calculated hydrogen generation rate.....:		N/A
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m ³ /h).....:		N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%)		N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate		N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%)		N/A
M.7.4	Marking.....:		N/A
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A
M.8.2.2	Estimation of hypothetical volume V_Z (m ³ /s)		—
M.8.2.3	Correction factors		—
M.8.2.4	Calculation of distance d (mm)		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.10	Instructions to prevent reasonably foreseeable misuse		P
	Instructional safeguard.....:	See user manual.	P
N	ELECTROCHEMICAL POTENTIALS		N/A
	Material(s) used.....:		—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N/A
	Value of X (mm).....:		—
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		P
P.1	General	No openings	P
P.2	Safeguards against entry or consequences of entry of a foreign object		N/A
P.2.1	General		N/A
P.2.2	Safeguards against entry of a foreign object		N/A
	Location and Dimensions (mm)		—
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metallized plastic parts		N/A
P.2.3.2	Consequence of entry test		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	Metallized coatings and adhesives securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T _c (°C).....:		—
	Duration (weeks).....:		—
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		N/A
Q.1	Limited power sources		N/A
Q.1.1	Requirements		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) Regulating network limited output		N/A
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance		N/A
	Current rating of overcurrent protective device (A)		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		N/A
	Current limiting method		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General	No such consideration	N/A
R.2	Test setup	See above	N/A
	Overcurrent protective device for test.....		—
R.3	Test method	See above	N/A
	Cord/cable used for test		—
R.4	Compliance		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm).....		—
	Conditioning (°C)		—
S.3	Flammability test for the bottom of a fire enclosure		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Wall thickness (mm).....:		—
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm).....:		—
	Conditioning (°C)		—
T	MECHANICAL STRENGTH TESTS		
T.1	General		P
T.2	Steady force test, 10 N		N/A
T.3	Steady force test, 30 N		N/A
T.4	Steady force test, 100 N	(See appended table T.4)	P
T.5	Steady force test, 250 N		N/A
T.6	Enclosure impact test	(See appended table T.6)	P
	Fall test		P
	Swing test		P
T.7	Drop test		N/A
T.8	Stress relief test.....	(See appended table T.8)	P
T.9	Glass Impact Test.....		N/A
T.10	Glass fragmentation test		N/A
	Number of particles counted		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)		N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		
U.1	General		N/A
	Instructional safeguard :		N/A
U.2	Test method and compliance for non-intrinsically protected CRTs		N/A
U.3	Protective screen		N/A
V	DETERMINATION OF ACCESSIBLE PARTS		
V.1	Accessible parts of equipment		N/A
V.1.1	General		N/A
V.1.2	Surfaces and openings tested with jointed test probes		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
V.1.3	Openings tested with straight unjointed test probes		N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		N/A
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		N/A
V.2	Accessible part criterion		N/A
X	ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)		N/A
	Clearance : (See appended table X)		N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		N/A
Y.1	General		N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by :		N/A
Y.3.2	Test apparatus		N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure :		N/A
Y.3.5	Compliance		N/A
Y.4	Gaskets		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods..... :		N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means		N/A
Y.5	Protection of equipment within an outdoor enclosure		N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3..... :		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Y.5.5.3	IP6X equipment		N/A
Y.6	Mechanical strength of enclosures		N/A
Y.6.1	General		N/A
Y.6.2	Impact test.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Classification of electrical energy sources						P
	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (V)	I (mA)	Type ¹⁾	
5Vdc	The EUT is designed to be supplied by 5Vdc external supply	Normal	5Vdc	--	--	--	ES1
8.36Vdc	Battery output	Normal	8.36Vdc	--	--	--	ES1
Supplementary information:							
1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.							
2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.							

6.2.2	TABLE: Power source circuit classifications						P
	Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	
Charging port and internal circuit	Normal condition	--	--	--	--	--	PS2**
Battery (pack) P+ to P-	Normal condition	5.26	7.35	38.65	--	--	PS2
Battery (cell) B+ to B-	Normal condition	6.74	15.60	105.10	--	--	PS3
Supplementary information:							
Abbreviation: SC= short circuit; OC= open circuit							
1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.							
2) ** The product doesn't support USB PD or equivalent charging exceeding 100W.							

6.2.3.2	TABLE: Determination of resistive PIS			P
	Location	Operating and fault condition	Dissipate power (W)	
All components on main board	--	--	--	Yes
Supplementary information:				
A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.				
If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS				

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Clause	Requirement + Test	Result - Remark	Verdict
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classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

5.4.1.4, 9.3, B.1.5, B.2.6	TABLE: Temperature measurements					P
	Supply voltage (V).....	See below	See below	See below	See below	
Ambient temperature during test T_{amb} ($^{\circ}\text{C}$)	See below		See below	See below	See below	—
Maximum measured temperature T of part/at:	T ($^{\circ}\text{C}$)				Allowed T_{max} ($^{\circ}\text{C}$)	
	Condition 1	Condition 2	Condition 3	Condition 4		
Battery body	30.9	27.4	31.0	27.7	Ref.	
Speaker wire	27.7	27.4	--	26.5	80- 40+25.3=39.3	
PCB near U12	30.3	28.7	--	29.1	130- 66+25.3=89.3	
PCB near U17	28.0	27.6	--	26.4	130- 66+25.3=89.3	
PCB near U5	29.9	28.4	--	29.2	130- 66+25.3=89.3	
Plastic enclosure inside near U12	29.7	28.0	--	27.6	Ref.	
Plastic enclosure outside near U12	28.2	27.3	--	27.2	#48	
Keypad surface	27.6	27.4	--	26.1	#48	
fingerprint plate surface	27.6	27.4	--	26.1	#48	
Plastic enclosure outside near input port	--	--	29.1	27.5	#48	
Ambient	25.5	25.3	25.3	25.6	--	
Temperature T of winding:	t_1 ($^{\circ}\text{C}$)	--	--	R_2 (Ω)	T ($^{\circ}\text{C}$)	Allo wed T_{max} ($^{\circ}\text{C}$)
--	--	--	--	--	--	--
Supplementary information:						
* Measured fully charged battery voltage						

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Clause	Requirement + Test	Result - Remark	Verdict

Temperature limit for TS1 of accessible enclosure according to Table 38.

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 55°C. (Charging temperature: 40°C, operating temperature: 55°C, when the product is working (discharged mode), the battery cannot be charged, use the worse operating temperature 55°C as Tma.)

For working condition description, see appended table B.2.5.

B.2.5	TABLE: Input test								P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status	
Condition 1: Powered by DC source, built-in dead lithium battery pack, turn on fingerprint sensor, turn the alarm to the max. volume, continuous operation product.									
5Vdc	--	1.40	--	7.00	--	--	--	--	--
Condition 2: Powered by built-in lithium battery pack (fully charged), turn on fingerprint sensor, turn the alarm to the max. volume, continuous operation product.									
8.36Vdc	--	0.25	--	2.08	--	--	--	--	--
Condition 3: DC source charger for empty battery only. (Charging through type-C port of the battery body)									
5Vdc	--	1.45	--	7.25	--	--	--	Battery charging current: 0.78A	
Condition 4: DC source charger for empty battery only. (Charging through type-C port of the product)									
5Vdc		0.82	--	4.10	--	--	--	Battery charging current: 0.48A	
Supplementary information:									

B.3, B.4	TABLE: Abnormal operating and fault condition tests							P
Ambient temperature T _{amb} (°C).....	: 25°C, if not specified							—
Power source for EUT: Manufacturer, model/type, outputrating ..	: --							—
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observation		
Condition 1								
Speaker	s-c	5Vdc	10mins	--	--	Input current: 1.4A to 1.4A EUT works as normal. No damage, no hazard.		
U1B pin 2-8	s-c	5Vdc	10mins	--	--	Input current: 1.4A to 0A EUT shut down immediately. No damage, no hazard.		

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Clause	Requirement + Test				Result - Remark		Verdict
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U3B pin A1-A2	s-c	5Vdc	10mins	--	--	Input current: 1.4A to 1.4A EUT works as normal. No damage, no hazard.	
U18B pin 3-4	s-c	5Vdc	10mins	--	--	Input current: 1.4A to 1.4A EUT works as normal. No damage, no hazard.	
Condition 2							
U1A pin 3-4	s-c	Fully charged battery	10mins	--	--	Battery discharge current: 0.25A to 0.25A EUT works as normal. No damage, no hazard.	
D1A	s-c	Fully charged battery	10mins	--	--	Battery discharge current: 0.25A to 0.25A EUT works as normal. No damage, no hazard.	
Speaker	s-c	Fully charged battery	4hrs57mins	Type-K	Plastic enclosure outside near U12: 27.7 Keypad surface: 27.5 fingerprint plate surface: 27.5 Ambient: 25.3	Battery discharge current: 0.25A to 0.30A EUT works as normal. No damage, no hazard.	
Q8A D-S	s-c	Fully charged battery	10mins	--	--	Battery discharge current: 0.25A to 0.25A EUT works as normal. No damage, no hazard.	
U3B pin A1-A2	s-c	Fully charged battery	10mins	--	--	Battery discharge current: 0.25A to 0.25A EUT works as normal. No damage, no hazard.	
B- to P-(Battery protection board)	s-c	Fully charged battery	10mins	--	--	Battery discharge current: 0.25A to 0.25A EUT works as normal. No damage, no hazard.	
Condition 3							

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B- to P-(Battery protection board)	s-c	5Vdc	10mins	--	--	Input current: 1.45A to 1.45A Battery charge current: 0.78A to 0.78A EUT works as normal. No damage, no hazard.
D1A	s-c	5Vdc	10mins	--	--	Input current: 1.45A to 1.45A Battery charge current: 0.78A to 0.78A EUT works as normal. No damage, no hazard.
NTC1(R10)	s-c	5Vdc	10mins	Type-K	Battery surface temp.: 40.3 Ambient: 40.0	Input current: 1.45A to 0A Battery charge current: 0.78A to 0A EUT shut down immediately. No damage, no hazard.
NTC2(RT2)	s-c	5Vdc	10mins	Type-K	Battery surface temp.: 40.3 Ambient: 40.0	Input current: 1.45A to 0A Battery charge current: 0.78A to 0A EUT shut down immediately. No damage, no hazard.
U1 pin 3-4	s-c	5Vdc	10mins	--	--	Input current: 1.45A to 1.45A Battery charge current: 0.78A to 0.78A EUT works as normal. No damage, no hazard.
U2 pin 2-6	s-c	5Vdc	10mins	--	--	Input current: 1.45A to 0A Battery charge current: 0.78A to 0A EUT shut down immediately. No damage, no hazard.
NTC1(R10)	o-c	5Vdc	10mins	Type-K	Battery surface temp.: 40.3 Ambient: 40.0	Input current: 1.45A to 0A Battery charge current: 0.78A to 0A EUT shut down immediately. No damage, no hazard.
NTC2(RT2)	o-c	5Vdc	10mins	Type-K	Battery surface temp.: 40.3 Ambient:	Input current: 1.45A to 0A Battery charge current: 0.78A to 0A EUT shut down immediately. No

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Clause	Requirement + Test			Result - Remark		Verdict
				40.0	damage, no hazard.	
Condition 4						
B- to P-(Battery protection board)	s-c	5Vdc	10mins	--	--	Input current: 0.82A to 0.82A Battery charge current: 0.48A to 0.48A EUT works as normal. No damage, no hazard.
U1A pin 3-4	s-c	5Vdc	10mins	--	--	Input current: 0.82A to 0.82A Battery charge current: 0.48A to 0.48A EUT works as normal. No damage, no hazard.
U14A pin 2-3	s-c	5Vdc	10mins	--	--	Input current: 0.82A to 0.82A Battery charge current: 0.48A to 0.48A EUT works as normal. No damage, no hazard.
U18B pin 3-4	s-c	5Vdc	10mins	--	--	Input current: 0.82A to 0.82A Battery charge current: 0.48A to 0.48A EUT works as normal. No damage, no hazard.
Supplementary information:						
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.						
1) s-c: Short-circuited, o-c: Open-circuited. 2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions. 3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition. 4) The temperatures were measured under the worse case normal mode defined in clause B.2.1. Temperature limit: 58 °C						

M.3	TABLE: Protection circuits for batteries provided within the equipment	P
Is it possible to install the battery in a reverse polarity position?	No	--
Equipment Specification	Charging	
	Voltage (V)	Current (A)
	5.0	--
Manufacturer/type	Battery specification	

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	Non-rechargeable batteries		Rechargeable batteries				
	Discharging current (A)	Unintentional charging current (A)	Charging		Discharging current (A)	Reverse charging current (A)	
			Voltage (V)	Current (A)			
Lumi United Technology Co., Ltd / BAT-X01D	--	--	4.25	2.5	2.5	--	
Note: The tests of M.3.2 are applicable only when above appropriate data is not available.							
Specified battery temperature (°C).....: Charging: 0-45 °C --							
Component No.	Fault condition	Charge/ discharge mode	Test time	Temp. (°C)	Current (A)	Voltage (V)	Observation
--	--	--	--	--	--	--	--
Supplementary information:							
Abbreviation: SC= short circuit; OC= open circuit NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal.							

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium battery					P
Maximum specified charging voltage (V).....: 4.25					--	
Maximum specified charging current (A)					2.5	
Highest specified charging temperature (°C)					45	
Lowest specified charging temperature (°C)					0	
Battery manufacturer/type	Operating and fault condition	Measurement			Observation	
		Charging voltage (V)	Charging current (A)	Temp. (°C)		
Only charging condition						
Cell	Normal	4.18	0.78	Battery 31.0 Ambient:25.3	No damage, no hazards	
	Abnormal	--	--	--	--	
	Single fault B- to P-(Battery protection board)	4.20	0.78	Battery 31.0 Ambient:25.3	No damage, no hazards	
	Highest specified charging temperature: 45°C	--	0	--	Unit stop charging at 48.5°C*	
	Lowest specified charging temperature: 0°C	--	0	--	Unit stop charging	
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature

The tests conducted three times and obtained the same result.

* A Temperature within 4°C tolerance is acceptable as HSCT on battery surface since the battery heats up while being charged in a 45 °C ambient chamber for testing per IEC 62133-2.

T.2, T.3, T.4, T.5	TABLE: Steady force test						P
Location/Part	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Observation	
Enclosure top (T.4)	Plastic	1)	--	100	5	Enclosure remained intact, no crack/ opening developed.	
Enclosure bottom (T.4)	Plastic	1)	--	100	5	Enclosure remained intact, no crack/ opening developed.	
Enclosure side (T.4)	Plastic	1)	--	100	5	Enclosure remained intact, no crack/ opening developed.	
Supplementary information:							
1). See appended table 4.1.2.							

T.6, T.9	TABLE: Impact test					N/A
Location/Part	Material	Thickness (mm)	Height (mm)	Observation		
Enclosure top	Plastic	1)	1300	Enclosure remained intact, no crack/ opening developed.		
Enclosure bottom	Plastic	1)	1300	Enclosure remained intact, no crack/ opening developed.		
Enclosure side	Plastic	1)	1300	Enclosure remained intact, no crack/ opening developed.		
Supplementary information:						

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

T.8	TABLE: Stress relief test					P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Complete of samples (with Li-ion battery pack)	Plastic	1)	70	7	Enclosure remained intact, no crack/opening developed. Internal sharp edges and corners was not accessible after test.	
Supplementary information:						
1). See appended table 4.1.2.						

IEC 62368-1

Clause	Requirement + Test	Result - Remark	Verdict
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4.1.2 TABLE: List of critical components						P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
PCB	Interchangeable	Interchangeable	V-0, 130°C	UL 796	UL	
Plastic enclosure	LG CHEM LTD	LUPOY EF-1006F(M)(f1)	V-0, 70°C, min. thickness 1.5mm	UL 94	UL E67171	
Metal enclosure	Interchangeable	Interchangeable	Aluminium/Zinc, min. thickness 1.5mm	IEC/EN 62368-1	Tested with appliance	
Internal wire	Interchangeable	Interchangeable	VW-1, 80°C, Min. 26AWG	UL 758	UL	
Battery	Lumi United Technology Co., Ltd	BAT-X01D	7.3Vdc, 4880mAh, 35.63Wh. Charging Input: 5.0Vdc, 2A (Type-C)	IEC/EN 62133-2:2017+AMD1:2021	Issued by UL, CB report number: P25041000601, CB certificate number: DK-167226-UL	
- Cell	EVE Energy Co., Ltd.	INR21700/50E	3.65V, 5000mAh	IEC/EN 62133-2:2017+AMD1:2021	UL CB (Ref. Certif. No.: DK-137507-UL)	
NTC resistor	LONGJING	LJ103FBXH040	10K NTC±1% B=3435	IEC/EN 62368-1	Tested with appliance	
Speaker	Interchangeable	Interchangeable	8ohm, rated power: 1.0W, max. power: 1.2W	IEC/EN 62368-1	Tested with appliance	

Supplementary information:

- 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.
- 2) Licenses are available upon requested

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1 (AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES (Audio/video, information and communication technology equipment)			
Differences according to : AS/NZS 62368.1:2022			
TRF template used: : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. : AU_NZ_ND_IEC62368_1E			
Attachment Originator : JAS-ANZ			
Master Attachment : 2022-07-01			
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	National Differences		
Appendix ZZ	Variations to IEC 62368-1:2018 (ED. 3.0) for Australia and New Zealand		
ZZ1 Scope	This Appendix lists the normative variations to IEC 62368-1:2018 (ED. 3.0)		
ZZ2 Variations	The following modifications are required for Australian/New Zealand conditions:		
2	After the first paragraph, add the following: The Australian or Australian/New Zealand Standards listed below are modified adoptions of, or not equivalent to, the IEC normative references and are required for the application of this Standard. All references in the source text to those IEC normative references shall be replaced by references to the corresponding Australian or Australian/New Zealand Standards. Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably -AS/NZS 3112, Approval and test specification—Plugs and socket-outlets -AS/NZS 3123, Approval and test specification—Plugs, socket-outlets and couplers for general industrial application -AS/NZS 3191, Electric flexible cords -AS/NZS 60884.1. Plugs and socket-outlets for household and similar purposes, Part 1: General requirements -IEC 60086-2 Primary batteries — Part 2: Physical and electrical specifications -AS/NZS 60065, Audio, video and similar electronic apparatus—Safety requirements (IEC 60065:2015 (ED.8.0) MOD) -AS/NZS 60320.1, Appliance couplers for household and similar general purposes,		
	Class III equipment		
	N/A		

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><i>Part 1: General requirements (IEC 60320-1, Ed.2.1 (2007) MOD)</i></p> <p>-AS/NZS 60320.2.2, <i>Appliance couplers for household and similar general purposes</i></p> <p><i>Part 2.2: Interconnection couplers for household and similar equipment (IEC 60320-2-2, Ed.2.0 (1998) MOD)</i></p> <p>-AS/NZS 60695.2.11, <i>Fire hazard testing, Part 2.11: Glowing/hot wire based test methods—Glow-wire flammability test method for end-products</i></p> <p>-AS/NZS 60695.11.5, <i>Fire hazard testing, Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance</i></p> <p>-AS/NZS 60695.11.10, <i>Fire hazard testing, Part 11.10: Test flames—50 W horizontal and vertical flame test methods</i></p> <p>-AS/NZS 60884.1, <i>Plugs and socket-outlets for household and similar purposes,</i></p> <p><i>Part 1: General requirements</i></p> <p>-AS/NZS 60950.1, <i>Information technology equipment—Safety, Part 1: General requirements (IEC 60950-1, Ed.2.2 (2013), MOD)</i></p> <p>IEC 61032:1997, <i>Protection of persons and equipment by enclosures—Probes for verification</i></p> <p>-AS/NZS 61558.1, <i>Safety of Power Transformers, Power Supplies, Reactors and Similar Products, Part 1: General requirements and tests (IEC 61558-1 Ed 3, MOD)</i></p> <p>-AS/NZS 61558.2.16, <i>Safety of transformers, reactors, power supply units and similar products for voltages up to 1 100 V, Part 2.16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units.</i></p>		
4.7.2	<p>Requirements</p> <p><i>Delete the text of the second paragraph and replace with the following:</i></p> <p>Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flat-pin socket-outlet conforming to AS/NZS 3112, shall conform to the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets. Conformity is checked by inspection and, if necessary, by the tests in AS/NZS 3112.</p> <p>NOTE: Equipment with plug portions for use in countries other than Australia and New Zealand will need to conform to other countries' requirements</p> <p>Note Additional AS/NZS 3112 Appendix J,TRF is appended to end of this TRF.</p>	Class III equipment	N/A
4.7.3	<p>Compliance Criteria</p> <p><i>Delete this clause</i></p>		N/A

IEC62368_1E - ATTACHMENT				
Clause	Requirement + Test	Result - Remark		Verdict
4.8.1	General After second list, <i>add</i> the following: NOTE: Refer to the Consumer Goods (Products Containing Button/Coin Batteries) Safety Standard 2020 and Consumer Goods (Products Containing Button/Coin Batteries) Information Standard 2020 for more information on button cell batteries in Australia..	No such battery used		N/A
5.4.10.2.1	General <i>Delete</i> the first paragraph and <i>replace</i> with the following: In Australia, the separation is checked by the test given in both Clause 5.4.10.2.2 and Clause 5.4.10.2.3. In New Zealand, the separation is checked by the test given in either 5.4.10.2.2 or 5.4.10.2.3..			N/A
Table 28	<i>Delete</i> Table 28 and <i>replace</i> with the following:			
Parts		Impulse test		Steady state test
		New Zealand	Australia	New Zealand
Parts indicated in Clause 5.4.10.1 a) ^a		2.5 kV	7.0 kV for hand-held telephones and headsets, 2.5 kV for other equipment.	1.5 kV
Parts indicated in Clause 5.4.10.1 b) and c) ^b		1.5 kV ^c		1.0 kV
^a Surge suppressors shall not be removed. ^b Surge suppressors may be removed, provided that such devices pass the impulse test of Clause 5.4.10.2.2 when tested as components outside the equipment. ^c During this test, it is allowed for a surge suppressor to operate and for a sparkover to occur in a GDT.				
5.4.10.2.2	<i>Delete</i> “NOTE” and <i>replace</i> with “NOTE 1”. After NOTE 1, <i>add</i> the following: NOTE 2: For Australia, the 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 3: For Australia, the value of 2.5 kV for Clause 5.4.10.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.			N/A
5.4.10.2.3	<i>Delete</i> “NOTE” and <i>replace</i> with “NOTE 1”. After NOTE 1, <i>add</i> the following: NOTE 2: For Australia, where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 3: The 3 kV and 1.5 kV values for Australia have been determined considering the low frequency induced voltages from the power supply distribution system.			N/A
6	Electrically-caused fire			N/A
6.6	After Clause 6.6, <i>add</i> the new Clauses 6.201 as follows: 6.201 External power supplies, docking stations and other similar devices (see special national conditions)			N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.6	Stability of equipment		N/A
Table 36	Footnote ^a , after first sentence, add the following: Equipment having displays with moving images shall include “television sets and display devices”.		N/A
8.6.1	After Clause 8.6.1 add the following new clauses: 8.6.201 Restraining Device fixing point (see special national conditions) 8.6.202 Restraining device (see special national conditions)		N/A
Annex F Paragraph F.3.3.4	Rated Voltage <i>Delete “NOTE” and replace with NOTE1”</i> After NOTE 1, add the following Equipment that is intended for connection to the supply mains in Australia and New Zealand shall be marked with: (a) A rated voltage of: <ul style="list-style-type: none">• 230 V for single phase equipment• 400 V for poly phase equipment Or (b) A rated voltage range that includes: <ul style="list-style-type: none">• 230 V for single phase equipment• 400 V for poly phase equipment NOTE 2: equipment that is not rated as above is not suitable for direct connection to the supply mains in Australia or new Zealand.		N/A
Annex F.3.3.5	After the list, add the following Equipment that is intended for connection to supply mains in Australia or New Zealand shall be marked with a rated frequency of 50 Hz or a rated frequency range or nominal value which includes 50Hz		N/A
Annex F.3.8	After “The DC output of an external power supply”, insert ”or docking stations and other similar external devices”		N/A
Annex G Paragraph G.4.2	Mains connectors 1 After “IEC 60320”, insert “or AS/NZS 60320 series”. 2 After “IEC 60906-1”, insert ”or AS/NZS 3123” 3 After first paragraph add the following: 10 A or 15 A 250 V flat pin plugs for the connection of equipment to mains-powered socket-outlets for household or similar general use shall comply with AS/NZS 3112 or AS/NZS 60884.1.	Class III equipment	N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Paragraph G.5.3.1	<p>Transformers, General</p> <p>1 Third dashed point <i>replace</i> 'IEC 61558-1 and the relevant parts of IEC 61558-2' with 'AS/NZS 61558-1 and the relevant parts of AS/NZS 61558.2'</p> <p>2 Fourth dashed point <i>replace</i> 'IEC 61558-2-16' with 'AS/NZS 61558.2.16'.</p>		N/A
Annex G.7.1	<p>Mains supply cords, General</p> <p>Fourth dashed paragraph, <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1'</p>		N/A
Table G.7	<p>Sizes of conductors</p> <p>1 First column, second row, <i>delete</i> "6" and <i>replace</i> with "7.5"</p> <p>2 Second column, second row, <i>delete</i> '0,75' and <i>replace</i> with '0.75^b</p> <p>3 <i>Delete</i> NOTE 1.</p> <p>4 <i>Replace</i> 'NOTE 2' with 'NOTE:'.</p> <p>5 <i>Delete</i> 'Footnote b' and <i>replace</i> with the following: ^b This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0.5 mm² three-core supply flexible cords are not permitted; see AS/NZS 3191).</p> <p>6 Footnote c <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1'</p> <p>7 Footnote d <i>replace</i> 'IEC 60320-1' with 'AS/NZS 60320.1'</p>		N/A
Annex M M 2.1	Add "IEC 60086-2" to the list		N/A
Annex M Paragraph M.3.2	<p>Test method</p> <p><i>Delete</i>"NOTE" and <i>replace</i> with "NOTE 1"</p> <p>After NOTE 1 <i>add</i> the following:</p> <p>NOTE 2: In cases where the voltage source is provided by power from an unassociated power source, consideration should be given to the effects of possible single fault conditions in the unassociated equipment. If the power source is unknown then it should be assumed that the maximum limit of ES1 may be applied to the source input under assumed single fault conditions in the source when assessing the charging circuit in the equipment under test.</p>		P
	Special national conditions (if any)		

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
6.201	<p>External power supplies, docking stations and other similar devices</p> <p>For external power supplies, docking stations and other similar devices, during and after abnormal operating conditions and during single fault conditions the output voltage—</p> <ul style="list-style-type: none"> (a) at all ES1 outlets or connectors shall not increase by more than 10 % of the output rated voltage under normal operating conditions, measured after 3 s of introducing a single fault condition and after 3 s of introducing abnormal operating conditions; and (b) of a USB outlet or connector shall not increase by more than 3 V or 10 % of the output rated voltage under normal operating conditions, whichever is higher, measured after 3 seconds of introducing a single fault condition and after 3 s of introducing abnormal operating conditions <p>For equipment with multiple rated voltages at the output, the requirements apply with the equipment configured for each output rated voltage in turn</p> <p>NOTE: This is intended to reduce the possibility of battery fire or explosion in attached equipment or accessories when charging secondary lithium batteries. The 3 s measurement delay is based on IEC document 108/742/INF, <i>TC 108, Standards Interpretation Panel Question 15 — Output voltage</i>, in relation to similar requirements in IEC 62368-3:2017.</p> <p>Conformity shall be checked by measurement, taking into account the abnormal operating conditions of Annex B.3 and the simulated single fault conditions of Annex B.4.</p>		N/A
8.6.201	<p>Restraining device fixing point</p> <p>Freestanding-capable MS2 and MS3 television sets and display devices shall be provided with a fixing point to facilitate the anchoring of the equipment from toppling</p> <p>The fixing point shall conform to Clause 8.7 where the fixing point uses a wall, ceiling or other structure mount. Alternatively, the fixing point shall be capable of withstanding a pull equal to the mass of the equipment in all directions without damage</p> <p>Instructions for installation or instructions for use shall be provided to specify correct use of the fixing point</p>		N/A

IEC62368_1E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
8.6.202	<p>Restraining device</p> <p>MS2 and MS3 television sets and display devices shall be provided with a restraining device and associated hardware to attach to the television set or display device.</p> <p>The restraining device shall be capable of withstanding a pull equal to the mass of the equipment in all directions.</p> <p>Instructions for installation or instructions for use shall be provided to specify correct use of the fixing point</p> <p>.</p>		N/A

Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 1 Overall view

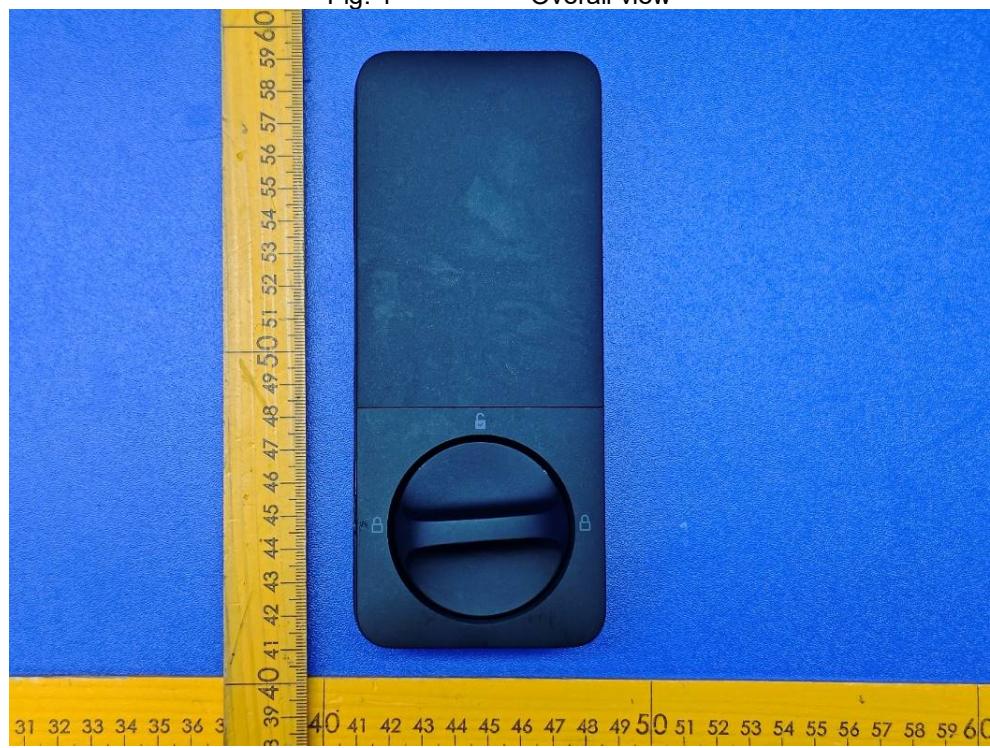


Fig. 2 External view (Inner Panel)

Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 3 External view (Inner Panel)

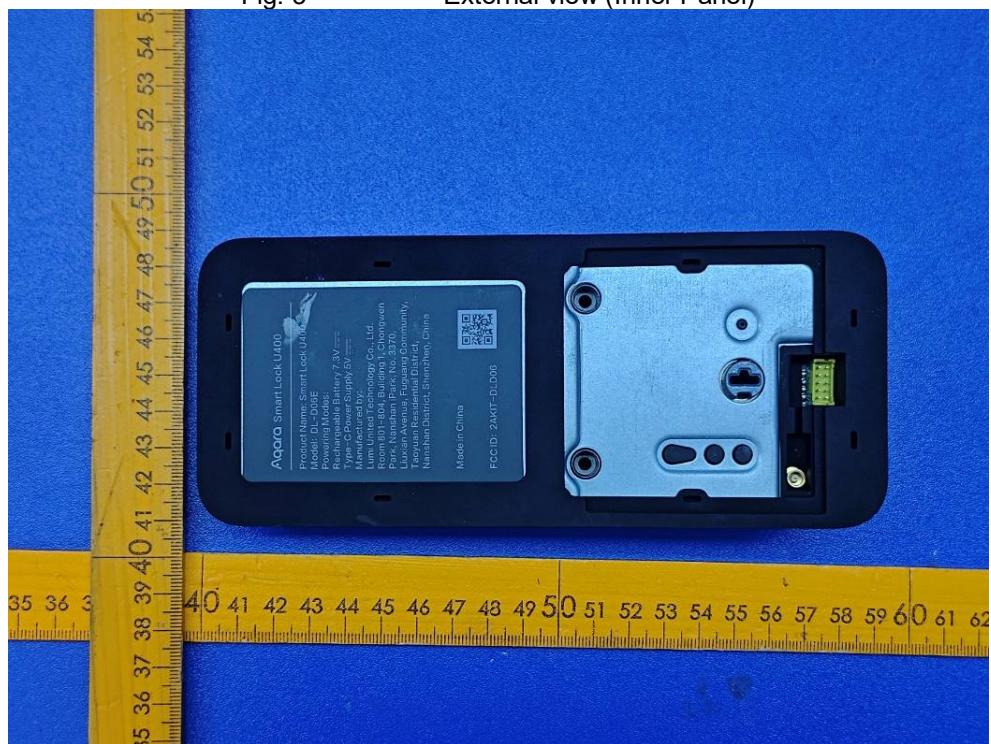


Fig. 4 External view (Inner Panel)

Photo Documentation

Product: Smart Lock U400

Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D



Fig. 5 Internal view (Inner Panel)



Fig. 6 Battery charging port view (Inner Panel)

Photo Documentation

Product: Smart Lock U400

Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D



Fig. 7

Internal view (Inner Panel)

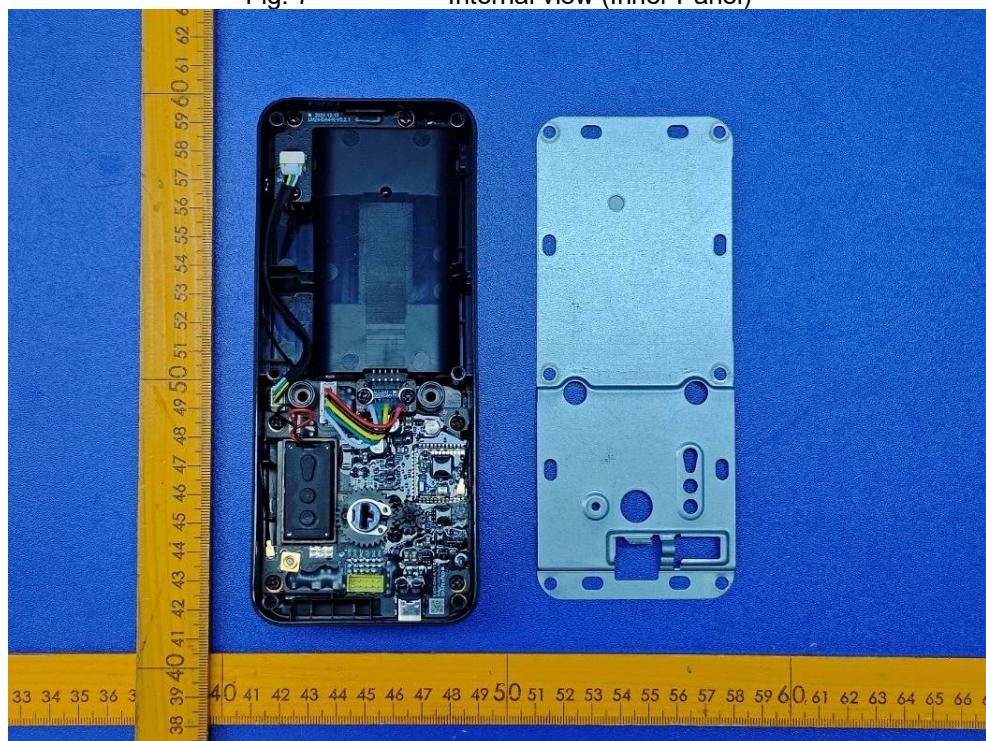


Fig. 8

Internal view (Inner Panel)

Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 9 Internal view (Inner Panel)

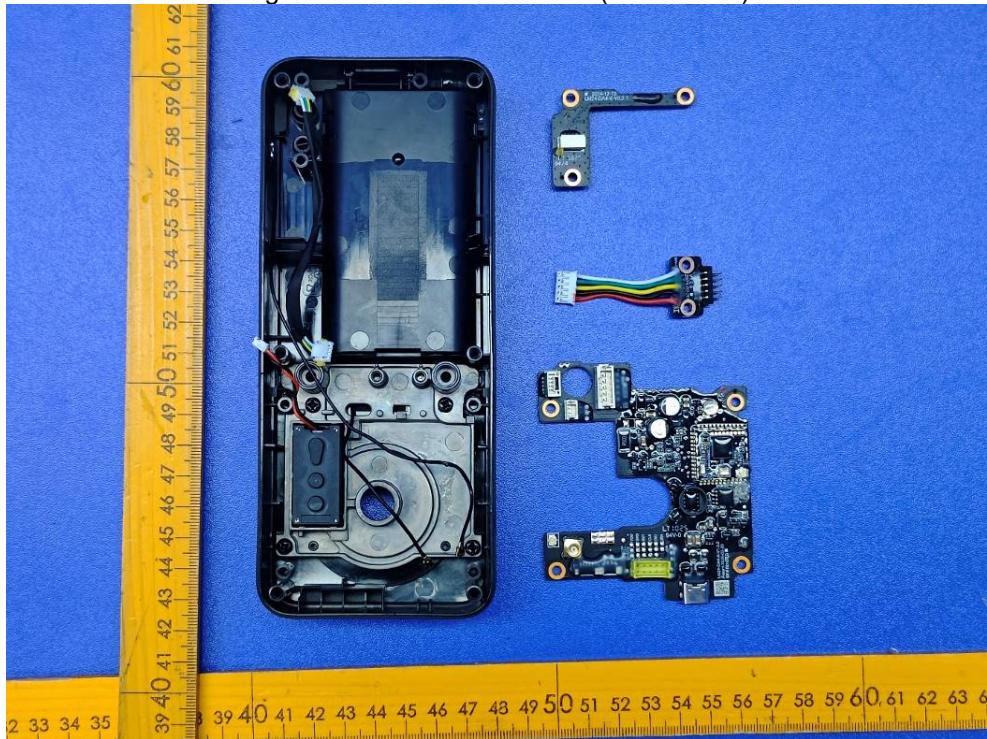


Fig. 10 Internal view (Inner Panel)

Photo Documentation

Product: Smart Lock U400

Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

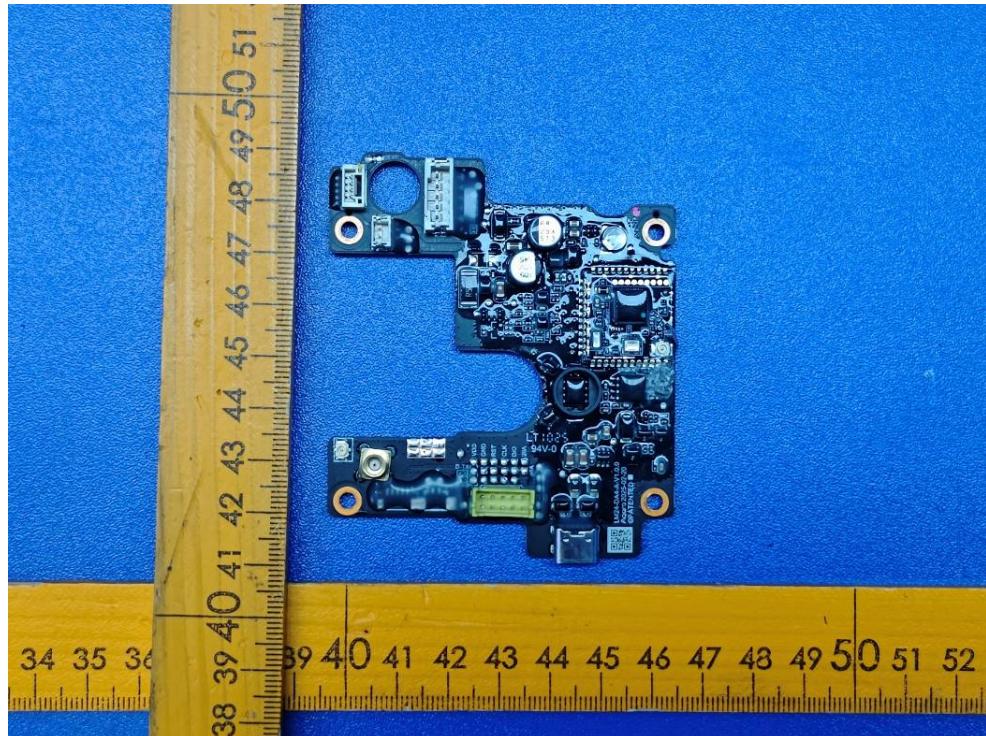


Fig. 11 PCB view (Inner Panel)

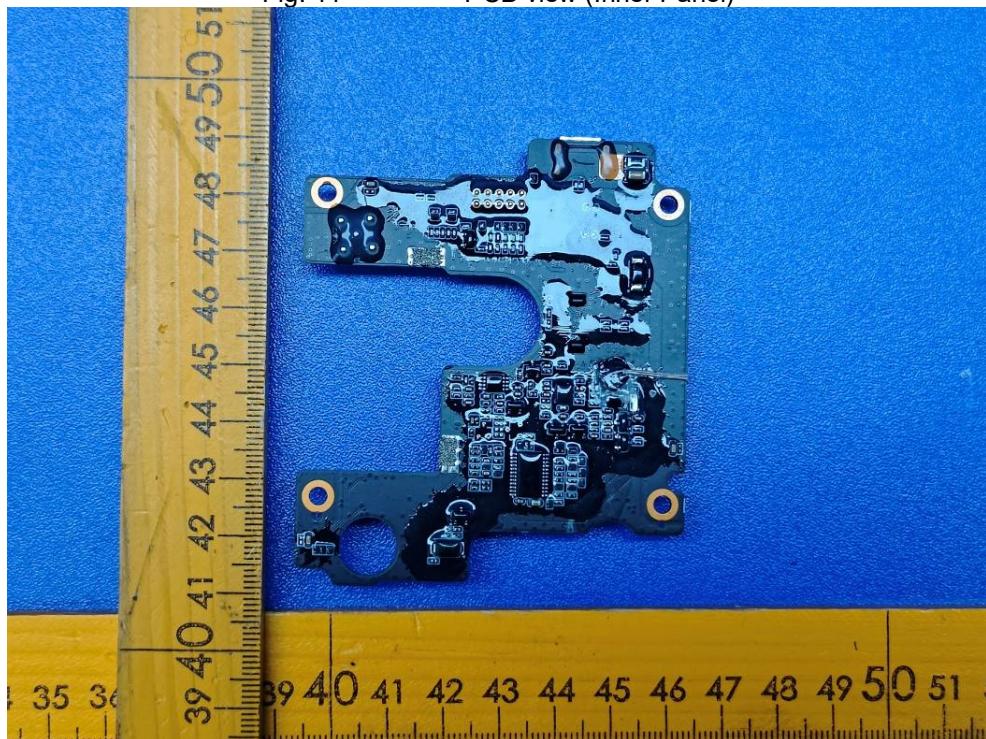


Fig. 12 PCB view (Inner Panel)

Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 13 External view (Outer Panel)

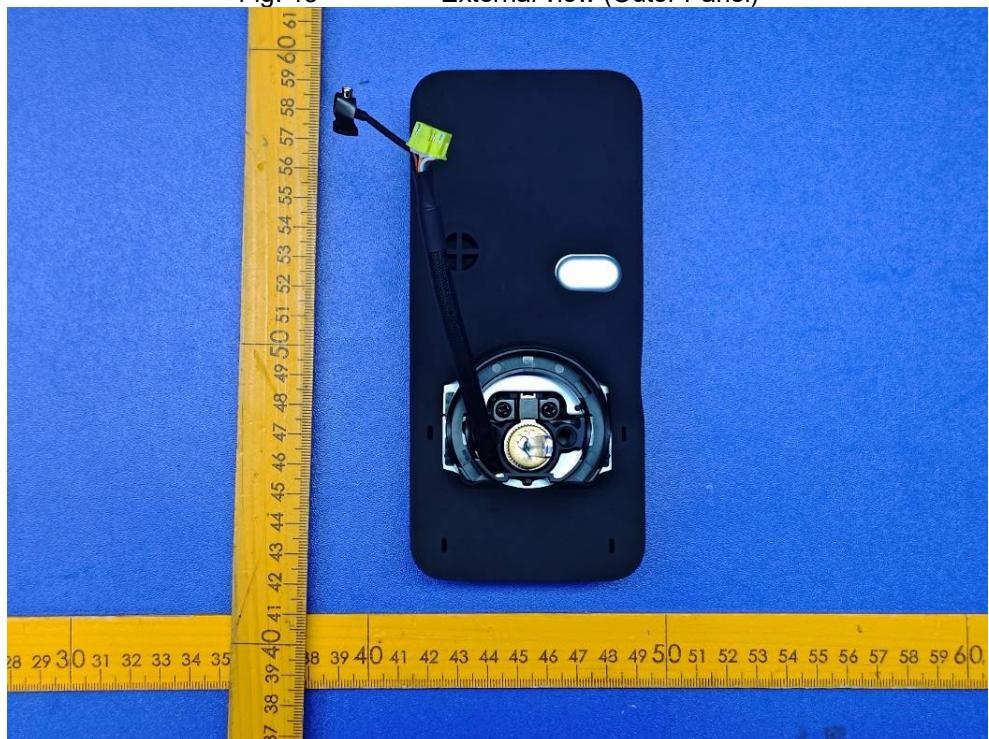


Fig. 14 External view (Outer Panel)

Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 15 Emergency power supply port (Outer Panel)



Fig. 16 Internal view (Outer Panel)

Photo Documentation

Product: Smart Lock U400

Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

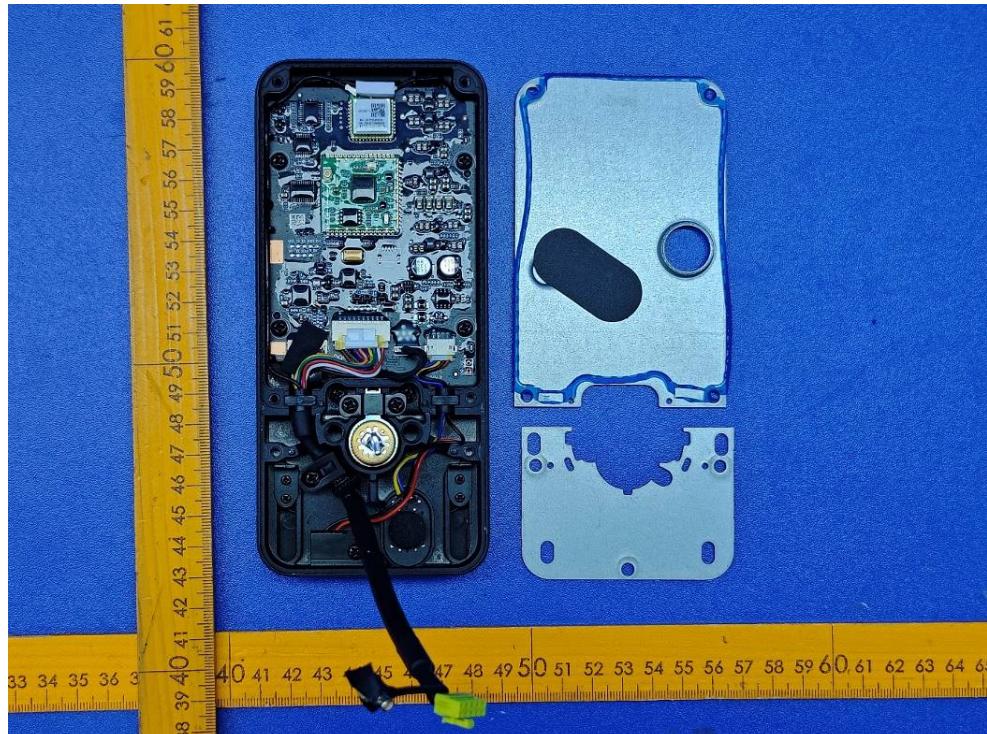


Fig. 17 Internal view (Outer Panel)

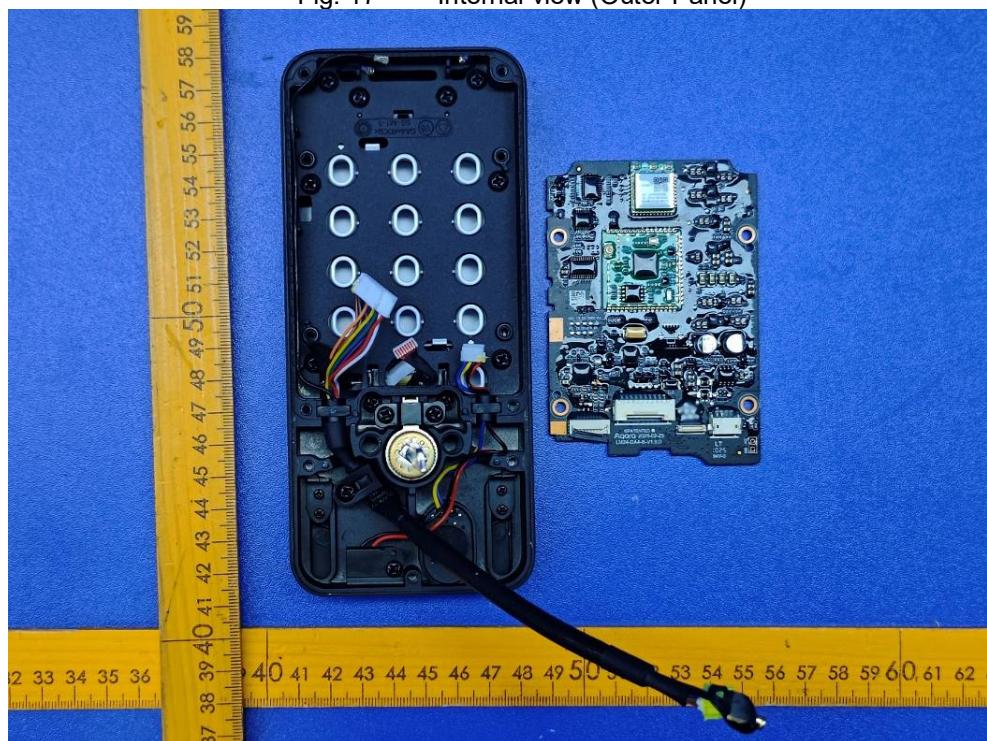


Fig. 18 Internal view (Outer Panel)

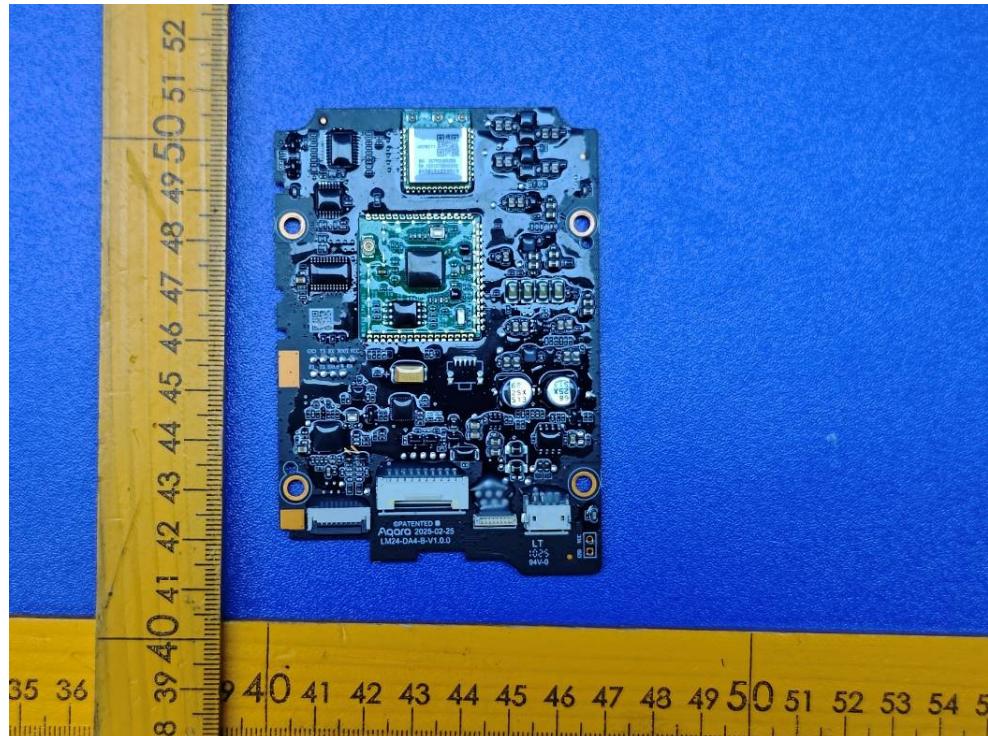
Photo DocumentationProduct: Smart Lock U400Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D

Fig. 19 PCB view (Outer Panel)

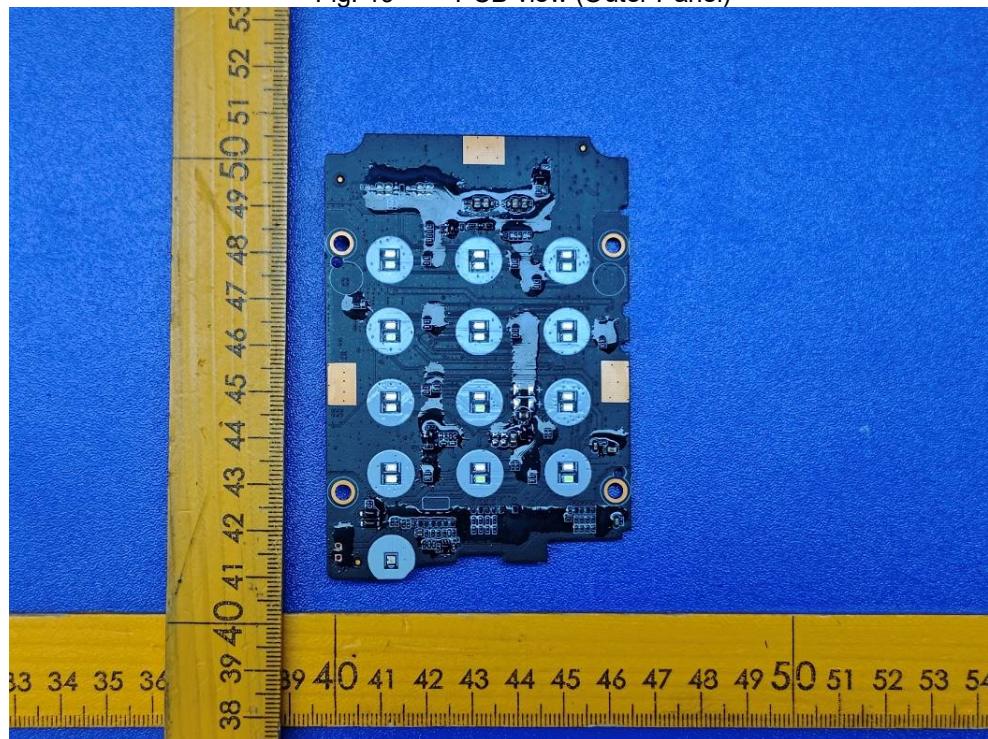


Fig. 20 PCB view (Outer Panel)

Photo Documentation

Product: Smart Lock U400

Type Designation: DL-D06E, DL-D16E, DL-D06D, DL-D16D, DL-D17D, DL-D15D



Fig. 21 Battery view



Fig. 22 Battery view